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10/830,181	04/22/2004	Klaus-Dieter Nittel	CHEMMT-206.1 CON	7728

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EXAMINER	
ZHENG, LOIS L	

ART UNIT	PAPER NUMBER
1793	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/830,181	NITTEL ET AL.	
	Examiner	Art Unit	
	LOIS ZHENG	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-16 are canceled in view of applicant's amendment filed 30 October 2008. New claims 17-25 are added. Therefore, claims 17-25 are currently under examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 17-19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. US 3,860,455(Hansen) in view of Clifford et al. US 2,375,468 (Clifford).

Hansen teaches a manganese phosphate coating method for treating steel surfaces utilizing a coating composition that overlaps the composition instantly claimed, including the concentrations ranges of iron(II), manganese, phosphate, nitrate, wherein the free acid, total acid and S-value (ratio of free phosphate to total phosphate ions) are also overlapping, as recited in claims 8 and 10 (col. 2, lines 10-33). Hansen further teaches the addition of additional components, including nickel, in a range that overlaps the claimed range, as recited in claim 13 (col. 2, line 65 to col. 3, line 7).

However, Hansen does not explicitly teach the claimed nitroguanidine and its claimed concentration.

Clifford teaches that accelerators, such as nitroguanidine, accelerate the action of manganese phosphating conversion coating solutions "to so great an extent that it can be affected in the cold" (col. 2, lines 16-27, 48-51; Example 1).

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add nitroguanidine to the coating solution of Hansen in order to accelerate the coating method and allow the coating to take place in a cold environment as taught in Clifford (col. 2, lines 48-51).

In addition, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the coating composition taught by the Hansen in view of Clifford overlaps that of the instant claims, In re Peterson, 65 USPQ2d 1379, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

Regarding the claimed manganese phosphate thickness and average maximum roughness depth, since the coating thickness varies depending upon the length of the coating time and the coating time as taught by Hansen(col. 4 lines 54-57) overlaps the coating time as discussed in the instant specification. Therefore, one of ordinary skill in the art would have found the claimed coating thickness and the claimed average maximum roughness obvious since Hansen in view of Clifford teaches a coating process that uses a substantially the same coating solution for substantially the same period of time as the process disclosed in the instant invention.

4. Claim 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further in view of Bittner et al. 5,795,408 (Bittner).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3.

However, Hansen in view of Clifford do not explicitly teach the addition of the claimed complex-forming agent.

Bittner teaches the addition of complexing agents for the alloying constituents of steel, including citric acid, to phosphating solutions in order to stop or reduce the formation of sludge, while allowing the formation of a phosphate coating on a galvanized surface, as recited in claims 20-31 (col. 2, lines 35-44; col. 3, lines 36-45).

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add a complexing agent, such as citric acid, to the composition of Hansen in view of Clifford in order to provide the desirable effect of stopping or reducing the formation of sludge, while allowing the formation of a phosphate film on the surface of a galvanized substrate, as recited in Bittner (col. 2, lines 35-44).

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further in view of Oei et al. 4,824,490 (Oei).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3 above.

However, Hansen in view of Clifford do not explicitly teach the replacement of the manganese ions with manganese carbonate.

Oei teaches the use of manganese carbonate to control the concentration of free acid (col. 3, lines 4-8)

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add manganese carbonate to the composition of Hansen in order to provide the desirable effect of controlling the concentration of free acid, as taught in Oei (col. 3, lines 4-6).

6. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further view of Shaw 2,987,427 (Shaw).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3 above.

However, Hansen in view of Clifford do not explicitly teach the step of subjecting the work pieces to sliding friction or the fabrication of the work pieces into axles, gear mechanisms and engine pistons.

Shaw teaches an example of a nitroguanidine manganese phosphate coated engine piston (i.e. a work piece subjected to sliding friction) (col. 5, lines 60-75; Example V). Shaw further teaches that the coating of the sliding work piece with manganese phosphate has the desirable effect of providing a wear resistant coating that liberates less sulfur dioxide and/or other chemicals (col. 1, lines 62-68):

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to subject the coated work piece to sliding friction or to fabricate the work piece into an engine piston because the use in said applications is known, as taught in Shaw and one of

ordinary skill in the art would have been motivated to provide a sliding surface that liberates less sulfur dioxide and/or other chemicals, as taught in Shaw (col. 1, lines 62-67).

Response to Declaration

7. The Declaration filed under 37 CFR 1.132 filed 30 October 2008 is insufficient to overcome the rejection of claims 8-10 and 13 based upon Hensen in view of Clifford as set forth in the last Office Action because:

In the Declaration, Applicant explained the small concentration differences between applicant's phosphate bath as described in the Declaration of 1 October, 2007 and Experiment C of Example 1 of Hansen, which is due to rework of the coating bath to obtain Total Acid value of 82 points.

The examiner appreciates and acknowledges applicant's such explanation.

Applicant further argues and reiterates that the addition of nitroguanidine significantly shortens the coating time.

The examiner does not find applicant's argument convincing because, Clifford already teaches that nitroguanidine is an accelerator. Therefore, its ability to speed up the coating process when added to the coating solution of Hansen is entirely expected. Applicant's experiment only further proves that the role of nitroguanidine as an accelerator.

Applicant further argues that Hansen's pickling time is twice as long as the coating time of the instant invention, which results in significantly higher roughness depth. In addition, Hansen also does not teach how to limit the iron content.

The examiner does not find applicant's argument persuasive because applicant's argument is based on Hansen alone while the rejections are based on combination of Hansen and Clifford wherein Clifford teaches using nitroguanidine as accelerator in a manganese phosphate coating. See MPEP 2145 (IV).

Applicant further argues that nitroguanidine is not a typical accelerator because it does not work as an oxidant; instead, it limits the amount of iron in the coating solution, thereby, reduces sludge generation.

Applicant's explanation of the function of nitroguanidine in the coating solution is greatly appreciated. However, they are not sufficient to overcome the obviousness rejection based on Hansen in view of Clifford. It is well settled that the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. In re Linter, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972). See MPEP 2144. In this case, Clifford's teaching of nitroguanidine as an accelerator in a manganese phosphate coating solution allows one of ordinary skill in the art to incorporate nitroguanidine into the manganese phosphate coating solution of Hansen for the same purpose of speeding up the coating formation. Though Hansen in view of Clifford do not explicitly mention limiting the iron concentration by adding nitroguanidine, one of ordinary skill in the art would have seen the same effect taking place in the process of Hansen in view of Clifford due to the addition of nitroguanidine.

Applicant further argues that no visible coatings are generated in the examples of Clifford.

The examiner does not find applicant's argument convincing because Clifford's description of Example 1 does not provide specific limitations on component concentrations of the manganese phosphate coating solution. It is unclear to the examiner if applicant's experiments with Example 1 of Clifford truly reflect the invention of Clifford.

Response to Arguments

8. Applicant's arguments filed 30 October 2008 have been fully considered but they are not persuasive.

Applicant's arguments are not persuasive partially for the same reasons as stated in paragraph 7 above.

Applicant further argues that Bittner is directed to phosphate coating on galvanized or alloy galvanized surfaces, not on iron or steel surfaces as claimed.

The Examiner does not find Applicant's arguments persuasive because Bittner is concerned with formation of phosphate sludge due to iron dissolved from the side of a steel strip that is not galvanized and purposes a solution to such a problem by adding complexing agent such as citric acid(col. 2 lines 35-44, col. 3 lines 36-45). Hansen also teaches forming phosphate sludge during its coating process(col. 3 lines 24-26) and is also concerned with the reduction of phosphate sludge formation(col. 1 lines 60-65). Therefore, one of ordinary skill in the art would have found it obvious to have

incorporated the complexing agent as taught by Bittner into the coating solution of Hansen in view of Clifford in order to further reduce the sludge formation.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

LLZ

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	10/830,181	NITTEL ET AL.	
	Examiner	Art Unit	
	LOIS ZHENG	1793	